

PATENT

Atty. Dkt. No. MRKS/0132

IN THE CLAIMS:

1. (Previously Presented) A method of controlling a downhole hydraulic sequential control system, comprising

providing the control system at a downhole location, the control system comprising hydraulic fluid, a first pressure relief valve set to open at a first pressure, and a second pressure relief valve set to open at a second pressure, wherein the second pressure is greater than the first pressure; and

transmitting the pressure of downhole working fluid to the hydraulic fluid of the control system.

2. (Original) A method as claimed in claim 1, wherein the pressure relief valves provide flow directly or indirectly to corresponding actuators.

3. (Original) A method as claimed in claim 1, wherein the pressure of the hydraulic fluid is controlled through regulating the flow rate of the working fluid, by draining the working fluid through a throttle valve with flow dependent flow resistance.

4. (Previously Presented) A method as claimed in Claim 1, wherein the pressure from the working fluid is transmitted to the hydraulic fluid by a dividing piston.

5. (Original) A method as claimed in claim 4, wherein the area of the dividing piston acted on by the working fluid is larger than the area of the piston acting on the hydraulic fluid so that the pressure of the hydraulic fluid is higher than the pressure of the working fluid.

6. (Original) A method as claimed in Claim 1, wherein the pressure from the working fluid is transmitted to the hydraulic fluid by means of a booster.

7. (Currently Amended) A downhole hydraulic sequential control system in comprising

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a first pressure relief valve set to open at a first pressure;
a second pressure relief valve set to open at a second pressure, wherein the second pressure is greater than the first pressure; and
a dividing piston arranged to be influenced by pressure of downhole working fluid and transmit pressure [[to]] through hydraulic fluid to the pressure relief valves.

8. (Original) A device as claimed in claim 7, wherein the dividing piston forms part of a booster.

9. (Original) A device as claimed in claim 7, further comprising a throttle valve communicatively connected to a working fluid chamber by the dividing piston.

10. (Original) A device as claimed in claim 7, arranged so that the pressure of the hydraulic fluid is the same as the pressure of the working fluid.

11. (Original) A device as claimed in claim 7, wherein the area of the dividing piston acted on by the working fluid is greater than the area of the dividing piston acting on the hydraulic fluid.

12. (Previously Presented) A method of controlling a downhole hydraulic sequential control system in which a plurality of pressure relief valves are arranged to open sequentially by introduction of a hydraulic fluid, the method comprising transmitting the pressure of downhole working fluid to the hydraulic fluid of the control system by a dividing piston, wherein the area of the dividing piston acted on by the working fluid is larger than the area of the piston acting on the hydraulic fluid so that the pressure of the hydraulic fluid is higher than the pressure of the working fluid.